

## COMPOSITIONS FOR THREE-DIMENSIONAL PRINTING OF SOLID OBJECTS

### ABSTRACT OF THE DISCLOSURE

5 A three-dimensional printing materials system and method can produce both appearance models and small numbers of functional parts in an office environment. The method can include building cross-sectional portions of a three-dimensional article, and assembling the individual cross-sectional areas in a layer-wise fashion to form a final article. The individual cross-sectional areas can be built by using an ink-jet printhead to deliver an aqueous solvent or binder to an adhesive particulate mixture,  
10 causing the particles of the mixture to adhere together, and to previous cross-sectional areas. The binder can include at least one of nonaqueous organic monomeric compound, anionically ionizable polymer, cationic polymer, polymer, waterborne colloid, or inorganic solute.